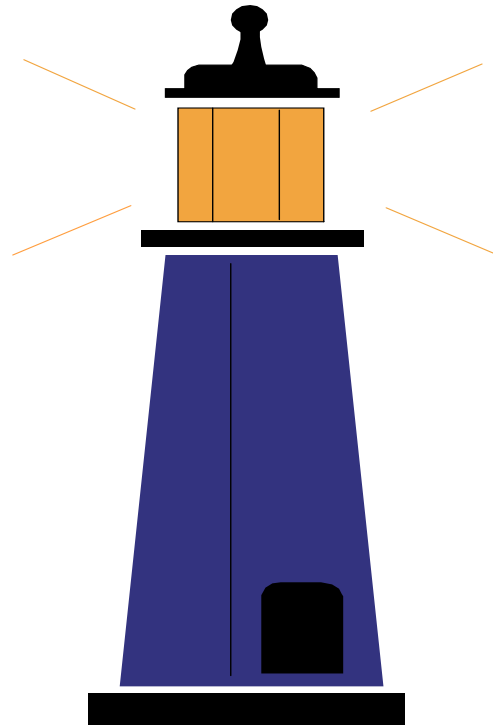


# Safety as a Value

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Presented by R. Thomas



# Presentation Goals

- Safety as a personal goal
- Importance of PPE
- Physical Fitness & related issues
- LCES
- Leadership & safety
- Final items

# Definitions

- Safety: Freedom from danger, harm, risk, or injury; security
- Value: Intrinsically valuable or desirable; to regard highly


# Personal Protective Equipment

- Hardhat
- Gloves
- Goggles
- Respirator
- Leather Boots
- Nomex
- Fire Shelter
- Portable Radio
- Chainsaw chaps
- Hearing Protection

# PPE-continued

- Wear ALL assigned PPE
- Protect particularly airways & eyes
- Cover face if entrapped
- Fire Shelters even better
- Supervisors set the example
- “PPE is ugly but it works”

# Auto Ignition Temps.(F) of Clothing Types



■ Cotton	750
■ Cotton/poly(60/40)	900
■ Polyester	940
■ Nomex	1300

# Clothing Types Versus % Burn Injury

## **Nomex IIIA 6.1 oz:**

35% of Body Burned when 2<sup>nd</sup> & 3<sup>rd</sup> Degree Burn Injury Occurs

## **Cotton (100%) 6.5 oz Shirt/8.5 oz Pants:**

75% to 90% of Body Burned when 2<sup>nd</sup> & 3<sup>rd</sup> Degree Burn Injury Occurs

## **Poly/cotton Blend 7.5 oz coverall:**

75% to 90% of Body Burned when 2<sup>nd</sup> & 3<sup>rd</sup> Degree Burn Injury Occurs



# Fire Shelter Issues

- Make shelter easy to reach
- Protect airways at all costs
- Attempt escape where success likely
- Hold shelter tight
- Get in shelter; stay in shelter
- No packs in shelters

# Carbon Monoxide Effects

- Alertness-dull senses
- Vision-difficult to discern colors,brightness
- Time perception-poor judgment of
- Fatigue-increased for work done
- Judgment-often contrary to training & safe practices
- Muscular coordination-difficulty in doing basic tasks

# Physical Fitness

- Aerobic fitness-30 min.per day min
- Strength conditioning
- Flexibility conditioning
- ACCLIMATION -exercise in heat conditions
- Fitness is important ALL year long

# Acclimation Benefits

- Earlier onset of sweating with exposure to heat
- Production of more sweat
- Production of more dilute sweat, conserving salts and minerals
- Benefits wane rapidly if not continued regularly

# Hydration

- Working hard in heat burns 1.0 quarts water per hour
- Re-hydrate only 0.7 quarts per hour
- Incur 0.3 quarts per hour deficit
- Hydrate before, during, & after prescribed burning
- Drink 1 quart water/sport drinks per hour
- Use sport drinks for one-third to one-half fluid needs

# Hydration-Continued

- Hydrate with water &/or sport drinks-not caffeine drinks
- Eat potassium-rich foods such as bananas and citrus fruits on a regular basis
- Assess hydration by observing volume, color, and concentration of urine
- Other signs are rapid heart rate, weakness, fatigue, dizziness, weight loss

# Heat Disorders

- Heat Cramps: heavy sweating; painful spasms
- Heat Exhaustion: Heavy sweating; weakness; weak pulse; skin cold, pale, and clammy; fainting; vomiting
- Heat Stroke: HIGH body temp.; hot, dry skin; rapid pulse; possible unconsciousness; **MEDICAL EMERGENCY!!!**

# What is LCES?

- LOOKOUTS; COMMUNICATION; ESCAPE ROUTES; SAFETY ZONES
- Key to safe procedures
- Put in place Before needed
- Functions sequentially
- Self-triggering
- Refocuses 10 Standard Fire-fighting orders



# Lookouts

- Must be able to see hazards
- Must be able to communicate with personnel
- Knows, observes, & anticipates fire behavior
- Critically positioned
- Relays observations
- Each person is lookout!!
- As risk increases, increase dedicated lookouts

# Communication

- Method for delivering messages
- Prompt & clear warning needed
- Radio, voice or both
- Communications continually passed down to everyone
- Determine communication plan  
Before start of prescribe burn

# Escape Routes

- Path for personnel to reach danger free area
- Escape routes must be identified
- TWO or more escape routes best
- Most elusive of LCES
- Reestablish escape routes as need arises
- Fireline most common escape route
- Closely tied to SAFETY ZONES

# Fire Orders

- Keep informed on fire weather conditions & forecasts
- Know what your fire is doing at all times
- Base all actions on current & expected behavior of the fire.
- Identify escape routes & safety zones, and make them known
- Post lookouts when there is possible danger

# Fire Orders-con't

- Be alert. Keep calm. Think clearly. Act decisively,
- Maintain prompt communication with your forces, your supervisor, and adjoining forces.
- Give clear instruction and insure they are understood.
- Maintain control of your forces at all times.
- Fight fire aggressively, having provided for safety first.

# Leadership

- Set example for safety
- Good Smoke Management Plan
- Hold briefing **before** p. burning
- Clear communication plan
- Emphasize LCES
- Establish what is acceptable
- Clearly communicate **Safety is #1 Priority**

# Final Safety Items

- P.burn in early AM when weather dictates
- Divide larger tracts into smaller parcels
- Don't burn when CSI over 500!!
- Burn small tracts early in PB season to become physically acclimated
- Allow for regular rest breaks
- Burn with adequate personnel
- Patrol & mop-up!

